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85-02

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 9

In the Matter of	)	
	)	ORDER
SOUTHERN PACIFIC TRANSPORTATION COMPANY, ROSEVILLE, CALIFORNIA	)	
	)	
Respondent.	)	Docket No. 85-02
	)	
PROCEEDING UNDER SECTION 3013 of the RESOURCE CONSERVATION AND RECOVERY ACT (42 USC §6934)	)	

JURISDICTION

The following Order is issued on this date to Southern Pacific Transportation Company or Respondent, pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) under §3013 of the Resource Conservation and Recovery Act (RCRA); 42 U.S.C. §6934, and delegated to the Director, Toxics and Waste Management Division, EPA, Region 9.

FINDINGS OF FACT

1. The Southern Pacific Transportation Company (SPTC) Roseville Site (the Site), is located southwest of Roseville, California, within the area bounded by Main Street to the

north, Roseville Road to the east, Atkinson Road to the west, and "U" Street to the south. The Site occupies an area approximately 1/4 mile wide and 4 miles long and is bisected by Dry Creek. Dry Creek is tributary to Natoma East Main Drainage Canal, which is tributary to the Sacramento River, approximately one-half mile above its confluence with the American River.

2. The Site is a facility as defined in 40 C.F.R. §260.10(21).

3. Groundwater is found in two zones beneath the Respondent's site: a shallow aquifer that lies 20 to 30 feet below the ground surface, and a deep (regional) aquifer that lies approximately 100 feet below the ground surface.

4. Groundwater from the deep aquifer is used in a blended drinking water system that serves approximately 34,200 people. There are approximately 10 households which use private wells drawing from the deep aquifer. The shallow aquifer is not presently used for drinking or irrigation.

5. The Site is comprised of two maintenance yards. The Rehabilitation and Maintenance Center (RAMAC) yard is that portion of the Site south of Dry Creek; the Southern Pacific Diesel Locomotive yard is that portion of the Site north of Dry Creek. In the past, waste water from both yards flowed to an industrial sewer that discharged to unlined surface impoundments adjacent to the northern bank of Dry Creek.

6. From 1906 until 1980 the RAMAC yard was operated by Pacific Fruit Express Company. In March, 1980, the ownership of the RAMAC yard was transferred to SPTC.

7. Over forty different hazardous wastes are or have been

generated and treated at the Site, according to a RCRA Part A Permit Application filed with the EPA, in October, 1983, by SPTC. Among these are carbon tetrachloride, trichloroethylene, hexachlorobenzene, dichloroethylene, lead, and arsenic.

8. The Site was identified as a potential hazardous waste site in August of 1979, because it contained surface impoundments in close proximity to surface waters of the United States. Respondent notified EPA, pursuant to §3010 of RCRA 42 U.S.C. §6925, that it was a generator of hazardous waste on August 18, 1980. EPA inspected the Site on July 13, 1983 to investigate Respondent's failure to file a Part A Permit Application, pursuant to §3005 of RCRA 42 U.S.C. §6925, for the use of surface impoundments at the Site.

9. The surface impoundments were historically used to treat and dispose of industrial waste water generated from the cleaning, repairing, and painting of freight cars and locomotives. In 1971, the only pond then receiving wastes was connected to the City of Roseville Sewage Treatment System, where the liquids from the pond were treated and subsequently discharged. That pond has recently been taken out of service by SPTC, as a result of RCRA §3008 enforcement actions and California Regional Water Quality Control Board actions. All waste streams are now routed to a central collection system and periodically removed to a hazardous waste landfill.

10. The Regional Water Quality Control Board (RWQCB) began investigating the surface impoundments at the Site in November, 1980, as part of a review of the City of Roseville's Waste

Discharge Requirements. The RWQCB requested of the City of Roseville a waste characterization, history of disposal practices, and a groundwater investigation of the surface impoundments.

11. In May 1982, the RWQCB received from the City of Roseville a priority pollutant scan of a water sample from the active pond. The scan revealed the presence in the pond of the following compounds:

Compound	Concentration
Carbon Tetrachloride	130 ppb
Chloroform	10 ppb
Hexachlorobenzene	6200 ppb
Dichloroethane	17 ppb
Tetrachloroethylene	24 ppb
Anthracene or Phenanthrene	1200 ppb

12. In September, 1982, in response to RWQCB requirements Respondent conducted a Phase I Hydrogeological/Water Quality Study of the Site, in the surface impoundment area. Results of the Phase I investigation reported by SPTC show contamination of the soil and shallow ground water as follows:

Ground water	Concentration
Arsenic	64 ppb
Dichloroethane	6 ppm
Dichloroethylene	4 ppm
Xylene isomers	6 ppm

Soil	Concentration
Arsenic	31 ppm
Lead	230 ppm
Poly-aromatic hydrocarbons	133 ppm

13. In 1983, Respondent conducted a Phase II investigation of the surface impoundment area. The purpose of the investigation was to determine vertical and horizontal extent of soil and

ground water contamination, and to identify and investigate eight other areas at the Site that had been used for waste handling and disposal. The investigation showed the presence of the following compounds:

Ground water	Concentration
Arsenic	50 ppb
Soil/Sludge	
Arsenic	20 ppm
Lead (Soluble)	11 ppm
Phenanthrene	53 ppm
Unidentified Hydrocarbons	20,000 - 30,000 ppm

14. Carbon tetrachloride has been implicated as an animal carcinogen. Animal carcinogens are suspected human carcinogens. Human and animal exposure to carbon tetrachloride can cause liver damage and can adversely affect the central nervous system.

15. Hexachlorobenzene (HCB) has been found to cause cancer in laboratory animals. Animal carcinogens are suspected human carcinogens. HCB bioaccumulates in fatty tissues and organs in the body. It has been shown to pass through the placenta and accumulate in the fetus. Evidence suggests that HCB may be teratogenic in laboratory animals, and may have degenerative effects on the ovaries, liver and kidneys. It may affect the immune system and alter the levels of proteins in the blood. HCB can react synergistically with metal compounds.

16. 1,1-Dichloroethylene (DCE) has been found to cause cancer in laboratory animals. Animal carcinogens are suspected human carcinogens. DCE has the ability to produce extensive and rapid liver damage at low concentrations, and to depress

the central nervous system.

17. Exposure to lead can cause a decrease in the concentration of blood proteins such as hemoglobin, which is responsible for transporting oxygen throughout the body, and can impair the utilization of iron. Exposure to lead can produce neurobiological defects in children such as learning disabilities and behavioral problems. As exposure levels increase, reproductive effects such as stillbirths and miscarriages occur. Severe, often irreversible damage develops in the blood-forming system, the nervous system, the heart and blood vessels, kidney, and liver. Lead may cross the placenta and affect the fetus.

18. Arsenic exposure has been linked to increased incidence of human lung and skin cancer. Chronic arsenic exposure can produce malaise, fatigue, changes in skin pigmentation, and gastrointestinal disturbances. Acute exposure to high levels can be fatal.

19. Certain halogenated and non-halogenated spent solvents, including tetrachloroethylene, dichloroethylene, and chloroform, are hazardous wastes as defined by §1004(5) of RCRA 42 U.S.C. §6903(5). Certain halogenated and non-halogenated spent solvents, including trichloroethylene, are listed as hazardous wastes at 40 CFR §261.31.

DETERMINATION

Based upon the foregoing Findings of Fact, the Director, Toxics and Waste Management Division, EPA, Region 9, determines that hazardous waste is or has been stored, treated, and disposed of at the Site, and the release of hazardous waste from the Site

may present a substantial hazard to human health or the environment and a response is warranted.

ORDER

Based upon the foregoing Determination and Findings of Fact, Respondent, Southern Pacific Transportation Company, is hereby Ordered pursuant to §3013 of RCRA, 42 U.S.C. §6934, to submit to EPA a proposal (the Proposal), to monitor, test, analyze, and report with respect to the presence at and release of hazardous waste at or from its Roseville, California facility, and shall implement such proposal, once approved by EPA. The purpose of this Proposal and its implementation, is to ascertain the nature and extent of the hazard to human health or the environment presented by the disposal or release of the hazardous waste described in the Findings of Fact. Attached as Exhibit "A" is the suggested EPA sampling strategy which specifies the sample numbers and locations, and the analytical parameters for the sampling and analysis program ordered herein. The Proposal, to be submitted by Respondent, shall include, but shall not be limited to:

1. A plan to install one additional shallow groundwater monitoring well in a location to be specified by EPA after consultation with SPTC.
2. A plan to collect, compile, and submit data to determine:
   a. organic and inorganic characteristics of the groundwater in all existing wells and in the additional well on the Site (see Exhibit "A");
   b. hydraulic gradient and head in the shallow aquifer;
   c. the concentrations of contaminants in surface and

sub-surface soils at discrete locations on the Site (see Exhibit "A"); and

d. the concentrations of contaminants in surface waters on and/or off Site (see Exhibit "A").

3. A plan specifying analytical and quality control protocols for measurement, monitoring, testing, sampling and analysis, including:

a. adequate sample identification;

b. document control and reporting;

c. sample preservation techniques;

d. chain of custody procedures;

e. use of EPA approved analytical methods; and

f. identification of person(s) conducting the sampling.

4. A plan specifying the precautions which will be taken to ensure the health and welfare of individuals associated with this project.

5. The proposal shall specify an expeditious and reasonable schedule for the implementation and completion of the various components. Failure to meet any milestones specified in the schedule shall constitute non-compliance with the Order, unless Respondent has obtained prior approval from EPA.

6. Respondent shall make available to EPA upon request a split or duplicate of any or all samples taken pursuant to this Order. Identification and maintenance of all split samples shall be in accordance with the protocols specified in Paragraph 3 of this Order.

7. It is the responsibility of Respondent to obtain the access to and use of any on or off-Site areas. Respondent will

provide access to the Site for EPA and its authorized representatives at all reasonable times and will permit such persons to be present and move freely in the area where any work is being conducted pursuant to this Order.

8. Respondent shall provide EPA with copies of all charts, maps, letters, memoranda, invoices, shipping manifests or other records or documents relevant to the subject matter of this Order as requested by EPA, or which are required by RCRA, or any other applicable law, to be provided by EPA.

9. All data, unless otherwise exempted by EPA, shall be reported to EPA in a timely manner and shall be in a format to be specified by EPA. Where applicable, detection limits are to be spe ified per EPA manual SW 846, entitled Test Methods for Evaluating Solid Waste.

10. Neither the United States Government nor any agency thereof shall be liable for any injuries or damages to persons or property resulting from acts or omissions of Southern Pacific Transportation Company, its officers, directors, employees, agents, receivers, trustees, successors, or assigns, or of any persons, including but not limited to firms, corporations, subsidiaries, contractors or consultants, in carrying out activities pursuant to this Order, nor shall the United States Government or any agency thereof be held out as a party to any contract entered into by Respondent in carrying out activities pursuant to this Order.

The Proposal ordered herein must be submitted by Respondent to Therese B. Gioia, Environmental Protection Agency, at the address listed below, within thirty (30) days of the date of

this Order. The Proposal shall be subject to review, modification and approval by EPA. Upon approval, Respondent shall implement the proposal. Satisfactory completion of requirements of this Order does not preclude the need for any further work, as may be determined by EPA based on the results of the work specified in this Order.

Respondent shall submit to EPA a written report describing the data collected and findings made within sixty (60) days after Respondent's receipt of EPA approval of the Proposal. Respondent shall immediately forward all data to EPA upon Respondent's receipt of data.

OPPORTUNITY TO CONFER

Under the provisions of the Act, Respondent is entitled to request a conference with EPA. At any conference held pursuant to Respondent's request, Respondent may appear in person and with counsel or other representatives for the purpose of presenting any objections, defenses or contentions which Respondent may have regarding this Order. Any objection, defense or contention which Respondent may make should be in writing, signed and forwarded to the contact person named above on or before the date on which Respondent is required to submit the Proposal. The opportunity to confer does not alter the requirement for submittal of the plan within thirty (30) days of the effective date of this Order.

LIABILITY

If EPA determines that Respondent is not able to conduct the activities required by the Order herein or if activities specified in the EPA-approved Proposal are not conducted to EPA's satisfaction,

then EPA may conduct such actions deemed reasonable by EPA to ascertain the nature and extent of the hazard. Respondent may then be ordered to reimburse EPA for the costs of such activity pursuant to §3013(d) of RCRA, 42 U.S.C. §6934( ). In the event Respondent fails or refuses to comply with the terms and provisions of this Order, EPA may commence a civil action, pursuant to §3013(e) of RCRA, 42 U.S.C. §6934(e) or any other appropriate law, to require compliance with such Order and to assess civil penalties not to exceed $5,000 for each day that Respondent fails or refuses to comply.

It is so ordered on this 14 day of March, 1985. This Order shall become effective immediately.

UNITED STATES ENVIROMENTAL PROTECTION AGENCY

By: Harry Seraydarian

HARRY SERAYDARIAN
DIRECTOR, TOXICS AND WASTE MANAGEMENT DIVISION

Contact person:

Therese B. Gioia (T-4-2)

Superfund Enforcement Section
Environmental Protection Agency
215 Fremont Street
San Francisco, California 94105
Telephone: (415) 974-8588

EXHIBIT "A"

Suggested EPA Sampling Strategy for SPTC Roseville Site

Soils	Sample Total
Abandoned Pond Area - Ponds B, C, D, & E	
4 borings (one in each pond) to 25 feet, sampled every 5 feet	24
Area B*	
1 boring to 25 feet, sampled every 5 feet	6
3 composites of blasting sand	3
Area C	
2 surface samples 0 - 6" of marshy area sediment	2
1 boring to 15 feet, sampled every 3 feet	4
Area D	
1 surface sample 0 - 6" of ponded area sediment	1
1 surface sample 0 - 6" near ponded area	1
Area I	
1 boring to 25 feet, sampled every 5 feet	6
1 composite sample of waste piles near area	1
Surface Water	
Area D	
1 surface water sample of ponded area	1
Dry Creek	
2 surface water samples, 1 upstream & 1 downstream	2

*Areas B, C, D, and I, are those same areas identified in the Phase II Investigation performed by SPTC as areas B, C, D, and I.

Groundwater	Sample Total
1 sample from every existing well on site including W-1, W-2, W-3, W-4, W-5, W-6, W-8, W-16, W-17, W-18, W-22, and W-23	12
1 sample from additional well to be installed under Order	1
TOTAL NUMBER OF SAMPLES	64

Analytical Parameters

Metals*
Priority Organic Pollutants
Pesticides

Detection limits and analytical methods to be used are specified per EPA Manual SW 846, entitled Test Methods for Evaluating Solid Waste.

*Composite samples of the blasting sand need only be analyzed for metals.